



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/549,912

09/20/2005

Roberto Alvarez Arevalo

36-1925

4788

23117

7590

01/23/2008

NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER

MCLEOD, MARSHALL M

ART UNIT

PAPER NUMBER

4152

MAIL DATE

DELIVERY MODE

01/23/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/549,912	Applicant(s) ALVAREZ AREVALO ET AL.	
	Examiner MARSHALL MCLEOD	Art Unit 4152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>30 December 2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-10 are pending in this application. Claims 3-6 are being amended by an amendment filed 9/20/2005.

Priority

2. Examiner acknowledges applicant's foreign priority based on United Kingdom 0306973.9 filed 3/26/2003.

Specification

3. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.

Art Unit: 4152

- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

4. The following claims are objected to for lack of antecedent basis: "maximum error values", claim 1 (line 13); claim 2 (lines 10, 15, and 17); claim 9 (line 11); claim 10 (lines 12 and 14).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claims 1-2, and 9-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing out particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

7. With respect to claim 1 (line 10), claim 2 (lines 7), claim 9 (line 10), and claim 10, (line 7), "the maximum value of a timing error". A timing error is not defined in the claim, making the claim vague and indefinite. It is not clear how the time is being calculated for the number of portions to be sent, why it is an error, and what is the meaning of the maximum of this error. Appropriate clarification is required.

8. With respect to claim 1 (line 8), claim 2 (line 13), claim 9,(line 7), and claim 10 (line 11), “the state of a receiving buffer”. The specification does not make clear, the specific information about the state of the receiving buffer. It is not clear how many different states the receiving buffer will have and how they will impact functionality, which renders the claim vague and indefinite.

Claim Rejections - 35 USC § 101

15. U.S.C. 101 reads as follows:

35 Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

16. Claims 7 and 8 are rejected under 35 U.S.C. 101 because they are directed toward non-statutory subject matter.

17. With respect to claims 7 and 8, the claims fail to place the invention squarely within one statutory class of invention. As a person skilled in the art the term “carrier” is interpreted in its plain meaning to mean, a “signal”. As such, the claim is drawn to a form of energy. Energy is not one of the four categories of invention and therefore this claim(s) is/are not statutory. Energy is not a series of steps or acts and thus is not a process. Energy is not a physical article or object and as such is not a machine or manufacture. Energy is not a combination of substances and therefor not a composition of matter.

Art Unit: 4152

18. With respect to claims 7 and 8, the claims fail to place the invention squarely within one statutory class of invention. Claiming a “video recording” the claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*. Descriptive material can be characterized as either “functional descriptive material” or “nonfunctional descriptive material.” Both types of “descriptive material” are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759.

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. **Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aharoni et al. (Patent No US 6,014,694), hereinafter Aharoni, in view of Kubler et al. (Pub. No US 2003/0002482 A1), hereinafter Kubler and further in view of Casper et al. (Patent No US 5,025,458), hereinafter Casper.**

Art Unit: 4152

21. With respect to claim 1, Aharoni discloses A method of transmitting an encoded sequence over a network to a terminal (Aharoni, Column 2, lines 16-20), comprising

- a. storing a plurality of encoded versions of the same sequence (Aharoni, Column 2, lines 29-32), wherein each version comprises a plurality of discrete portions of data (Aharoni, Column 2, lines 32-39; i.e. discrete portions of data = subset of levels) and each version corresponds to a respective different degree of compression (Aharoni, Column 2, lines 20-21; i.e. different degree of compression = ...the system adjusts the compression ratio);
 - b. transmitting a current one of said versions (Aharoni, Column 7, line 67, and continued through to Column 8, lines 1-3);
 - c. ascertaining the data rate permitted by the network (Aharoni, Column 11, lines 30-37);
 - d. ascertaining the state of a receiving buffer at the terminal (Aharoni, Column 16, lines 61-67);
 - e. for at least one candidate version, computing in respect of at least one discrete portion thereof as yet unsent the maximum value of a timing error that would occur were any number of portions starting with that portion to be sent at the currently ascertained permitted rate (Aharoni, Column 17, lines 52-59);
 - f. selecting one of said versions for transmission, in dependence on the results of said comparisons; and transmitting the selected version (Aharoni, Column 2, lines 60-61).
- Aharoni does not disclose a timing error and comparing the determined maximum error

values with the ascertained buffer state. However, Kubler discloses a timing error (Kubler, Page 20, [0299] lines 1-11).

It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the teachings of Aharoni with the teachings of Kubler in order to have an efficient error correction system and increase the quality and reliability of transmissions.

The combination of Aharoni and Kubler do not disclose comparing the determined maximum error values with the ascertained buffer state. However, Casper discloses comparing the determined maximum error values with the ascertained buffer state (Casper, Column 16, Claim 8).

It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the teachings of Aharoni and Kubler with the teachings of Casper in order to have an efficient error correction system and increase the quality and reliability of transmissions.

22. With respect to claim 2, Aharoni as modified discloses A method of transmitting an encoded sequence over a network to a terminal (Aharoni, Column 2, lines 16-20), comprising

g. storing a plurality of encoded versions of the same sequence (Aharoni, Column 2, lines 29-32), wherein each version comprises a plurality of discrete portions of data (Aharoni, Column 2, lines 32-39; i.e. discrete portions of data = subset of levels) and each version corresponds to a respective different degree of compression (Aharoni, Column 2, lines 20-21; i.e. different degree of compression = ...the system adjusts the compression ratio);

- h. for each version and for each of a plurality of nominal transmitting rates, computing in respect of at least one discrete portion thereof the maximum value of a timing error (Kubler, Page 20, [0299] lines 1-11; i.e. timing error) that would occur were any number of portions starting with that portion to be sent at the respective nominal rate (Aharoni, Column 17, lines 52-59);
- i. storing said maximum error values (Casper, Column 15, Claim 3);
- j. transmitting a current one of said versions (Aharoni, Column 7, line 67, and continued through to Column 8, lines 1-3);
- k. ascertaining the data rate permitted by the network (Aharoni, Column 11, lines 30-37);
- l. ascertaining the state of a receiving buffer at the terminal (Aharoni, Column 16, lines 61-67);
- m. for at least one candidate version, using the ascertained permitted data rate and the stored maximum error (Casper, Column 15, Claim 3) values to estimate a respective maximum error value corresponding to said ascertained permitted data rate (Aharoni, Column 17, lines 52-59);
- n. comparing the estimated maximum error values with the ascertained buffer state (Casper, Column 16, Claim 8);
- o. selecting one of said versions for transmission, in dependence on the results of said comparisons; and transmitting the selected version (Aharoni, Column 2, lines 60-61).

Art Unit: 4152

23. With respect to claim 3, it is rejected for the same reasons as claim 1 above. In addition Aharoni as modified discloses wherein maximum timing error determination is performed (Kubler, Page 20, [0299] lines 1-11) only for selected ones of said portions at which a version change is to be permitted (Aharoni, Column 9, lines 20-26).

24. With respect to claim 4, it is rejected for the same reasons as claim 1 above. In addition Aharoni as modified discloses in which each computed timing error value (Kubler, Column 9, lines 21-26; i.e. timing error) is the difference between (a) the time needed to transmit, at the relevant rate, the portion in question and zero or more consecutive subsequent portions up to and including any particular portion (Aharoni, Column 2, lines 15-28), and (b) the difference between the playing instant of the respective particular portion and the playing instant of the portion preceding the portion in question (Aharoni, Column 17, lines 40-49).

25. With respect to claim 5, it is rejected for the same reasons as claim 1 above. In addition Aharoni as modified discloses in which the sequence is a video sequence (Aharoni, Column 17, lines 40-49).

26. With respect to claim 6, it is rejected for the same reasons as claim 1 above. In addition Aharoni as modified discloses in which the sequence is an audio sequence (Aharoni, Column 18, lines 36-37; i.e. AVI can just be an audio sequence).

Art Unit: 4152

27. With respect to claim 7, Aharoni as modified discloses a video recording stored (Aharoni, Column 7, lines 49-55) on a carrier, comprising

- p. a plurality of encoded versions of the same sequence (Aharoni, Column 2, lines 29-32), wherein each version comprises a plurality of discrete portions of data (Aharoni, Column 2, lines 32-39; i.e. discrete portions of data = subset of levels) and each version corresponds to a respective different degree of compression (Aharoni, Column 2, lines 20-21; i.e. different degree of compression = ...the system adjusts the compression ratio);
- q. and for each discrete portion of each version and for each of a plurality of nominal transmitting rates, a maximum error value for that portion, being the maximum of (a) the value of a timing error (Kubler, Page 20, [0299] lines 1-11; i.e. timing error) that would occur were that portion to be sent at the respective nominal rate (Aharoni, Column 17, lines 52-59);
- r. and (b) the values of a timing error that would occur were that portion and any number of subsequent portions subsequent thereto to be sent at the respective nominal rate (Aharoni, Column 17, lines 52-59).

28. With respect to claim 8, Aharoni as modified discloses an audio recording stored (Aharoni, Column 7, lines 49-55) on a carrier, comprising

- s. a plurality of encoded versions of the same sequence (Aharoni, Column 2, lines 29-32), wherein each version comprises a plurality of discrete portions of data (Aharoni, Column 2, lines 32-39; i.e. discrete portions of data = subset of levels) and each version

Art Unit: 4152

corresponds to a respective different degree of compression (Aharoni, Column 2, lines 20-21; i.e. different degree of compression = ...the system adjusts the compression ratio);

t. and for each discrete portion of each version and for each of a plurality of nominal transmitting rates, a maximum error value for that portion, being the maximum of (a) the value of a timing error (Kubler, Column 9, lines 21-26; i.e. timing error) that would occur were that portion to be sent at the respective nominal rate (Aharoni, Column 17, lines 52-59);

u. and (b) the values of a timing error that would occur were that portion and any number of subsequent portions subsequent thereto to be sent at the respective nominal rate (Aharoni, Column 17, lines 52-59).

29. With respect to claim 9, Aharoni as modified discloses a store (Aharoni, Column 16, lines 50-60; i.e. store = database) storing a plurality of encoded versions of the same sequence (Aharoni, Column 2, lines 29-32), wherein each version comprises a plurality of discrete portions of data (Aharoni, Column 2, lines 32-39; i.e. discrete portions of data = subset of levels) and each version corresponds to a respective different degree of compression (Aharoni, Column 2, lines 20-21; i.e. different degree of compression = ...the system adjusts the compression ratio);

v. a transmitter (Aharoni, Column 17, lines 19-21); and

w. control means operable to receive data as to the data rate permitted by the network and data as to the state of a receiving buffer at the terminal (Aharoni, Column 3, lines 65-67 continued through to Column 4, lines 1-7) and, for at least one candidate version, to compute in respect of at least one discrete portion thereof as yet unsent the maximum

value of a timing error (Kubler, Page 20, [0299] lines 1-11; i.e. timing error) that would occur were any number of portions starting with that portion to be sent at the permitted rate (Aharoni, Column 17, lines 52-59), to compare the determined maximum error values with the buffer state (Casper, Column 16, Claim 8) and to select one of said versions for transmission, in dependence on the results of said comparisons (Aharoni, Column 2, lines 60-61).

30. With respect to claim 10, Aharoni as modified discloses a store (Aharoni, Column 16, lines 50-60; i.e. store = database) storing a plurality of encoded versions of the same sequence (Aharoni, Column 2, lines 29-32), wherein each version comprises a plurality of discrete portions of data (Aharoni, Column 2, lines 32-39; i.e. discrete portions of data = subset of levels) and each version corresponds to a respective different degree of compression (Aharoni, Column 2, lines 20-21; i.e. different degree of compression = ...the system adjusts the compression ratio), each version including, for each of a plurality of nominal transmitting rates, in respect of at least one discrete portion thereof, the maximum value of a timing error that would occur were any number of portions starting with that portion to be sent at the respective nominal rate (Aharoni, Column 17, lines 52-59);

- x. a transmitter (Aharoni, Column 17, lines 19-21); and
- y. control means operable to receive data as to the data rate permitted by the network and data as to the state of a receiving buffer at the terminal (Aharoni, Column 3, lines 65-67 continued through to Column 4, lines 1-7) and, for at least one candidate version, to compute in respect of at least one discrete portion thereof as yet unsent the maximum

value of a timing error (Kubler, Page 20, [0299] lines 1-11; i.e. timing error) that would occur were any number of portions starting with that portion to be sent at the permitted rate (Aharoni, Column 17, lines 52-59), to compare the estimated maximum error values with the buffer state (Casper, Column 16, Claim 8) and to select one of said versions for transmission, in dependence on the results of said comparisons (Aharoni, Column 2, lines 60-61).

Conclusion

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Pian et al. (Patent No US 6,366,614 B1) teaches a system and method for controlling the encoded data rate in a video compression procedure.

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARSHALL MCLEOD whose telephone number is (571)270-3808. The examiner can normally be reached on Monday - Friday 7:30 a.m-5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nabil El-Hady can be reached on (571) 272-3963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4152

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

M.M. 1/16/2008

/Nabil El-Hady/
Supervisory Patent Examiner, Art Unit 4152